

Corrected Sequence Listing2.ST25 SEQUENCE LISTING

RECEIVED

TECH CENTER 1800/2900

<110>	Poustka, et al.	SEQUENCE LISTI	NG	
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tct aat Ser Asr	cac agt gga att g His Ser Gly Ile A 35	ca acc agt caa la Thr Ser Gln 40	aaa aag cct act a Lys Lys Pro Thr A 45	gg ctt 143 org Leu
cca ggg Pro Gly	ccc tct agg gtg c Pro Ser Arg Val P 50	ct gct gca gga ro Ala Ala Gly 55	agc agc agc aag g Ser Ser Ser Lys v 60	tc cag 191 al Gln
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20 25 30 144 gaa gag ggc aaa gag tgg ttg cgt tct cat tct act gga ggg ctt cag Glu Glu Gly Lys Glu Trp Leu Arg Ser His Ser Thr Gly Gly Leu Gln 40 159 gac act ggc aac cag ÁSP Thr Gly Asn Gln 50 <210> 4

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cga gtg ttg Arg Val Leu	gat gca gag Asp Ala Glu 165	ccc ccc gag Pro Pro Glu	atg cct Met Pro 170 Page	Pro Cys Arg	cga ggt Arg Gly 175	529							

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ccc Pro 385	aag Lys	ctg Leu	tgg Trp	tat Tyr	cat His 390	ctc Leu	cac His	acc Thr	ttc Phe	ctt Leu 395	gag Glu	aag Lys	cac His	agc Ser	acc Thr 400	1201
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									Asp		Trp	aac Asn				1297

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2461

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Arg Arg Ser Leu Gly Leu Ala Leu Thr His Ser Phe Gly Pro Ser Leu 50 60

Ala Asp Thr Asp Leu Ser Pro Met Asp Gly Ile Ser Thr Cys Gly Pro 65 70 75 80

Lys Glu Glu Val Thr Leu Arg Val Val Arg Met Pro Pro Gln His 85 90 95

Ile Ile Lys Gly Asp Leu Lys Gln Gln Glu Phe Phe Leu Gly Cys Ser 100 105 110

Lys Val Ser Gly Lys Val Asp Trp Lys Met Leu Asp Glu Ala Val Phe 115 125

Gln Val Phe Lys Asp Tyr Ile Ser Lys Met Asp Pro Ala Ser Thr Leu 130 135 140

Gly Leu Ser Thr Glu Ser Ile His Gly Tyr Ser Ile Ser His Val Lys 145 150 155 160

Arg Val Leu Asp Ala Glu Pro Pro Glu Met Pro Pro Cys Arg Arg Gly
165 170 175

Val Asn Asn Ile Ser Val Ser Leu Lys Gly Leu Lys Glu Lys Cys Val 180 185 190

Asp Ser Leu Val Phe Glu Thr Leu Ile Pro Lys Pro Met Met Gln His 195 200 205

Tyr Ile Ser Leu Leu Leu Lys His Arg Arg Leu Val Leu Ser Gly Pro 210 215 220

Ser Gly Thr Gly Lys Thr Tyr Leu Thr Asn Arg Leu Ala Glu Tyr Leu 225 230 235 240

Corrected Sequence Listing2.ST25
Val Glu Arg Ser Gly Arg Glu Val Thr Glu Gly Ile Val Ser Thr Phe
245 250 255 Asn Met His Gln Gln Ser Cys Lys Asp Leu Gln Leu Tyr Leu Ser Asn 260 265 270 Leu Ala Asn Gln Ile Asp Arg Glu Thr Gly Ile Gly Asp Val Pro Leu 275 280 285 Val Ile Leu Leu Asp Asp Leu Ser Glu Ala Gly Ser Ile Ser Glu Leu 290 295 300 Val Asn Gly Ala Leu Thr Cys Lys Tyr His Lys Cys Pro Tyr Ile Ile 305 310 315 320 Gly Thr Thr Asn Gln Pro Val Lys Met Thr Pro Asn His Gly Leu His Leu Ser Phe Arg Met Leu Thr Phe Ser Asn Asn Val Glu Pro Ala Asn 340 350 Gly Phe Leu Val Arg Tyr Leu Arg Arg Lys Leu Val Glu Ser Asp Ser 355 360 365 Asp Ile Asn Ala Asn Lys Glu Glu Leu Leu Arg Val Leu Asp Trp Val 370 380 Pro Lys Leu Trp Tyr His Leu His Thr Phe Leu Glu Lys His Ser Thr 385 390 395 400 Ser Asp Phe Leu Ile Gly Pro Cys Phe Phe Leu Ser Cys Pro Ile Gly 405 410 415 Ile Glu Asp Phe Arg Thr Trp Phe Ile Asp Leu Trp Asn Asn Ser Ile 420 425 430 Ile Pro Tyr Leu Gln Glu Gly Ala Lys Asp Gly Ile Lys Val His Gly 435 440 445 Gln Lys Ala Ala Trp Glu Asp Pro Val Glu Trp Val Arg Asp Thr Leu 450 460 Pro Trp Pro Ser Ala Gln Gln Asp Gln Ser Lys Leu Tyr His Leu Pro 465 470 475 480 Pro Pro Thr Val Gly Pro His Ser Ile Ala Ser Pro Pro Glu Asp Arg 485 490 495

${\tt Corrected \ Sequence \ Listing 2.ST 25}$

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gtt gcc ccc ggc ccc tcc tca ggc tgc act cca ggg cag gtc cct ggg Val Ala Pro Gly Pro Ser Ser Gly Cys Thr Pro Gly Gln Val Pro Gly 50 55 60
tca tcg gct ctg tcg tcc cct cga cgt tcc ctg ggc ctt gca ctc agc Ser Ser Ala Leu Ser Ser Pro Arg Arg Ser Leu Gly Leu Ala Leu Ser 65 70 75 80
cat cct ttc agt cct agt ctc aca gac aca gac ctc tca ccc atg gat His Pro Phe Ser Pro Ser Leu Thr Asp Thr Asp Leu Ser Pro Met Asp 85 90 95
ggc atc agc acc tgt ggt tca aag gaa gag gtg acc ctg cgg gtg gtg 336 Gly Ile Ser Thr Cys Gly Ser Lys Glu Glu Val Thr Leu Arg Val Val 100 105 110
gtc cgg atg ccg ccc cag cac atc atc aaa ggg gac tta aag cag cag Val Arg Met Pro Pro Gln His Ile Ile Lys Gly Asp Leu Lys Gln Gln 115 120 125
gag ttc ttc ctg ggt tgc agc aag gtc agt ggc aaa gtt gac tgg aag Glu Phe Phe Leu Gly Cys Ser Lys Val Ser Gly Lys Val Asp Trp Lys 130 135 140
atg ctg gat gaa gcc gtt ttc caa gtg ttc aag gac tac att tct aaa 480 Met Leu Asp Glu Ala Val Phe Gln Val Phe Lys Asp Tyr Ile Ser Lys 145 150 155 160 Page 8

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			gag Glu													672
			atg Met													720
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			gcc Ala 260													816
			gtc Val													864
			tac Tyr													912
			gat Asp													960
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ctt Leu	cgg Arg	gtg Val	ctg Leu	gac Asp	tgg Trp	gtg Val	ccc Pro	aag Lys	Leu	tgg Trp Page	Tyr	cac His	ctc Leu	cac His	acc Thr	1248

Corrected Sequence Listing2.ST25 405 410 415	
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gac ctg tgg aac aat tcc atc atc ccc tat cta cag gaa gga gcc aag Asp Leu Trp Asn Asn Ser Ile Ile Pro Tyr Leu Gln Glu Gly Ala Lys 450 455 460	1392
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gcc tca ccc ccg gag gac agg aca gtc aaa gac agc act cca aac tcc Ala Ser Pro Pro Glu Asp Arg Thr Val Lys Asp Ser Thr Pro Asn Ser 515 520 525	1584
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gcc aac tac att gag tca cca gat cga gag act atc ctg gac ccc aac Ala Asn Tyr Ile Glu Ser Pro Asp Arg Glu Thr Ile Leu Asp Pro Asn 545 550 560	1680
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Page 10	<i>-333</i>

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<210> 8 <211> 565 <212> PRT <213> Mouse

<400> 8

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Leu Asn Ser Ala His Gln Leu Asp Gln Leu Arg Glu Thr Met His Asn 20 25 30

Met Gln Leu Glu Val Asp Leu Leu Lys Ala Glu Asn Asp Arg Leu Lys 35 40 45

val Ala Pro Gly Pro Ser Ser Gly Cys Thr Pro Gly Gln Val Pro Gly 50 60

Ser Ser Ala Leu Ser Ser Pro Arg Arg Ser Leu Gly Leu Ala Leu Ser 65 70 75 80

His Pro Phe Ser Pro Ser Leu Thr Asp Thr Asp Leu Ser Pro Met Asp 85 90 95

Gly Ile Ser Thr Cys Gly Ser Lys Glu Glu Val Thr Leu Arg Val Val 100 105 110

Val Arg Met Pro Pro Gln His Ile Ile Lys Gly Asp Leu Lys Gln Gln 115 120 125

Glu Phe Phe Leu Gly Cys Ser Lys Val Ser Gly Lys Val Asp Trp Lys 130 135 140

Met Leu Asp Glu Ala Val Phe Gln Val Phe Lys Asp Tyr Ile Ser Lys 145 150 155 160

Met Asp Pro Ala Ser Thr Leu Gly Leu Ser Thr Glu Ser Ile His Gly 170 175

Tyr Ser Leu Ser His Val Lys Arg Val Leu Asp Ala Glu Pro Pro Glu 180 185 190

Corrected Sequence Listing2.ST25
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200.00000000000000000000000000000000000	
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Ser Lys Leu Tyr His Leu Pro Pro Pro Ser Val Gly Pro His Ser Thr 500 510	
Ala Ser Pro Pro Glu Asp Arg Thr Val Lys Asp Ser Thr Pro Asn Ser 515 520 525	
Leu Asp Ser Asp Pro Leu Met Ala Met Leu Leu Lys Leu Gln Glu Ala 530 535 540	
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cgcaaacctg aggatttccg cggcccgccg gcaagacctc ggccaggttt acaggaaatc	180
tgtcattttt tattaaaatg gaaaactgtg aagaaagaaa aagatagcag ttgaagtcaa	240
aattctcgga tgactatttt gcttttgagg agtcagcatt taaaaacgat atgctgattt Page 14	300

ggaaggtcct g	ggagtaaac t	gcaaacttt at	tttttcca tt	caatcaat gga	tttttta 360								
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tgaagggcaa g	gaacctaatg t	g atg gat tt Met Asp Le 1	a tct tca g u Ser Ser G 5	gaa atg aac a Glu Met Asn A	ga cat 532 rg His 10								
				ng aag aag at In Lys Lys Il 25									
Thr Asp Trp				jc cac aag cg y His Lys Ar 40									
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atc atc cag Ile Ile Gln 60	att att gca Ile Ile Ala	aat gaa aaa Asn Glu Lys 65	gtt gaa ga Val Glu As 70	t atc aat gg p Ile Asn Gl	a tgt 724 y Cys								
cct aga agt Pro Arg Ser 75	cag tct cag Gln Ser Gln 80	atg att gaa Met Ile Glu	aat gtt ga Asn Val As 85	t gtc tgc ct p Val Cys Le	t agt 772 u Ser 90								
ttt cta gca Phe Leu Ala	gcc aga ggg Ala Arg Gly 95	gta aat gtt Val Asn Val	caa ggt ct Gln Gly Le 100	a tct gct ga u Ser Ala Gl 10	ı Ğlu								
Ile Arg Asn	gga aac tta Gly Asn Leu 110	aaa gcc att Lys Ala Ile 115	Leu Ğly Le	g ttt ttc ag u Phe Phe Se 120	t tta 868 ^ Leu								
tct cgc tac Ser Arg Tyr 125	aag cag caa Lys Gln Gln	caa cac cat Gln His His 130	caa caa ca Gln Gln Gl	g tac tat ca n Tyr Tyr Gli 135	g tcc 916 n Ser								
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gcc agc cag Ala Ser Gln 155				c agg ctt cca r Arg Leu Pro									
ccc tct agg (Pro Ser Arg)	gtg cct gct Val Pro Ala 175	gca gga agc Ala Gly Ser	agc agc aa Ser Ser Ly 180	g gtc cag gga s Val Gln Gly 18	/ Āla								
tct aat tta a Ser Asn Leu /													
aag cct cca a Lys Pro Pro 205	aat tat gca Asn Tyr Ala	aat gga aac Asn Gly Asn 210	gaa aaa gg Glu Lys Gl	t gaa gac cci y Glu Asp Pro 215	gaa 1156 Glu								

			atg Met			gtt	aaa	aac	ata	gca	gac		agg	cag		1204
			act Thr													1252
			aca Thr													1300
			ccc Pro 270													1348
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			ttc Phe													1492
			aac Asn													1540
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tac Tyr	atg Met 380	aca Thr	gat Asp	gga Gly	gga Gly	ctt Leu 385	aac Asn	cta Leu	tat Tyr	act Thr	aga Arg 390	agt Ser	ctg Leu	aac Asn	cga Arg	1684
			aca Thr													1732
			gtg Val													1780
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acc Thr	aca Thr	tcc Ser 445	tct Ser	gtc Val	agc Ser	tct Ser	tac Tyr 450	tcc Ser	aac Asn	atc Ile	acc Thr	gtc Val 455	ccc Pro	tct Ser	agg Arg	1876
			cag Gln						Ğlü		Arg 470					1924

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gac Asp	agc Ser	cat His	ggg Gly	gat Asp 495	gct Ala	ggt Gly	ggc Gly	aag Lys	tgg Trp 500	aag Lys	act Thr	gtg Val	tcc Ser	tct Ser 505	gga Gly	2020
ctt Leu	cct Pro	gaa Glu	gac Asp 510	ccc Pro	gag Glu	aag Lys	gca Ala	ggg Gly 515	cag Gln	aaa Lys	gct Ala	tcc Ser	ctg Leu 520	tct Ser	gtt Val	2068
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cca Pro	tct Ser 540	agg Arg	cag Gln	aaa Lys	gct Ala	gga Gly 545	aca Thr	agt Ser	gca Ala	ctc Leu	aaa Lys 550	aca Thr	ccc Pro	ggg Gly	aaa Lys	2164
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acc Thr	agc ser 620	agt Ser	gga Gly	gca Ala	acc Thr	ata Ile 625	aca Thr	agt Ser	ggc Gly	tct Ser	gca Ala 630	aca Thr	ctg Leu	ggt Gly	aaa Lys	2404
						att Ile										2452
						cag Gln										2500
						caa Gln										2548
tcc Ser	agc Ser	acc Thr 685	agt Ser	ggc Gly	att Ile	cct Pro	ggc Gly 690	cga Arg	gga Gly	ggc Gly	cac His	aga Arg 695	tcc Ser	agt Ser	acc Thr	2596
agc Ser	agt Ser 700	att Ile	gat Asp	tcc Ser	aac Asn	gtc Val 705	agc Ser	agc Ser	aag Lys	tct Ser	gct Ala 710	ggg Gly	gcc Ala	acc Thr	acc Thr	2644
tcg Ser	aaa Lys	ctg Leu	aga Arg	gaa Glu	cca Pro	act Thr	aaa Lys	att Ile	Gly	tca Ser age	Gly	cgc Arg	tcg Ser	agt Ser	cct Pro	2692

715	Corrected 720	Sequence Listing2.ST25 725	730
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gat tca gaa agt gtt Asp Ser Glu Ser Val 750	tct ttg tca ggt Ser Leu Ser Gly 755	tcc ccc aaa tcc agc ccc Ser Pro Lys Ser Ser Pro 760	acc 2788 Thr
tct gcc agc gcc tgt Ser Ala Ser Ala Cys 765	ggt gca caa ggt Gly Ala Gln Gly 770	ctc agg cag cca gga tcc Leu Arg Gln Pro Gly Ser 775	aag 2836 Lys
tat cca gat att gcc Tyr Pro Asp Ile Ala 780	tca ccc aca ttt Ser Pro Thr Phe 785	cga agg ttg ttt ggt gcc Arg Arg Leu Phe Gly Ala 790	aag 2884 Lys
gca ggt ggc aaa tct Ala Gly Gly Lys Ser 795	gcc tct gca cct Ala Ser Ala Pro 800	aat act gag ggt gtg aaa Asn Thr Glu Gly Val Lys 805	tct 2932 Ser 810
tcc tca gta atg ccc Ser Ser Val Met Pro 815	agc cct agt acc Ser Pro Ser Thr	aca tta gcg cgg caa ggc Thr Leu Ala Arg Gln Gly 820 825	agt 2980 Ser
ctg gag tca ccg tcg Leu Glu Ser Pro Ser 830	tcc ggt acg ggc ser Gly Thr Gly 835	agc atg ggc agt gct ggt Ser Met Gly Ser Ala Gly 840	ggg 3028 Gly
cta agc ggc agc agc Leu Ser Gly Ser Ser 845	agc cct ctc ttc Ser Pro Leu Phe 850	aat aaa ccc tca gac tta Asn Lys Pro Ser Asp Leu 855	act 3076 Thr
aca gat gtt ata agc Thr Asp Val Ile Ser 860	tta agt cac tcg Leu Ser His Ser 865	ttg gcc tcc agc cca gca Leu Ala Ser Ser Pro Ala 870	tcg 3124 Ser
gtt cac tct ttc aca Val His Ser Phe Thr 875	tca ggt ggt ctc Ser Gly Gly Leu 880	gtg tgg gct gcc aat atg Val Trp Ala Ala Asn Met 885	agc 3172 Ser 890
agt tcc tct gca ggc Ser Ser Ser Ala Gly 895	agc aag gat act Ser Lys Asp Thr	ccg agc tac cag tcc atg Pro Ser Tyr Gln Ser Met 900 905	act 3220 Thr
agc ctc cac acg agc Ser Leu His Thr Ser 910	tct gag tcc att Ser Glu Ser Ile 915	gac ctc ccc ctc agc cat Asp Leu Pro Leu Ser His 920	cat 3268 His
ggc tcc ttg tct gga Gly Ser Leu Ser Gly 925	ctg acc aca ggc Leu Thr Thr Gly 930	act cac gag gtc cag agc Thr His Glu Val Gln Ser 935	ctg 3316 Leu
ctc atg aga acg ggt Leu Met Arg Thr Gly 940	agt gtg aga tct Ser Val Arg Ser 945	act ctc tca gaa agc atg Thr Leu Ser Glu Ser Met 950	cag 3364 Gln
ctt gac aga aat aca Leu Asp Arg Asn Thr 955	cta ccc aaa aag Leu Pro Lys Lys 960	gga cta aga tat acc cca Gly Leu Arg Tyr Thr Pro 965	tca 3412 Ser 970
tct cgg cag gcc aac	caa gaa gag ggc	aaa gag tgg ttg cgt tct Page 18	cat 3460

Corrected Sequence Listing2.ST25 Ser Arg Gln Ala Asn Gln Glu Glu Gly Lys Glu Trp Leu Arg Ser His tct act gga ggg ctt cag gac act ggc aac cag tca cct ctg gtt tcc Ser Thr Gly Gly Leu Gln Asp Thr Gly Asn Gln Ser Pro Leu Val Ser cct tct gcc atg tca tct tct gca gct gga aaa tac cac ttt tct Pro Ser Ala Met Ser Ser Ser Ala Ala Gly Lys Tyr His Phe Ser aac ttg gtg agc cca aca aat ttg tct caa ttt aac ctt ccc ggg Asn Leu Val Ser Pro Thr Asn Leu Ser Gln Phe Asn Leu Pro Gly ccc agc atg atg cgc tca aac agc atc cca gcc caa gac tct tcc Pro Ser Met Met Arg Ser Asn Ser Ile Pro Ala Gln Asp Ser Ser 1035 1040 1045 ttc gat ctc tat gat gac tcc cag ctt tgt ggg agt gcc act tct Phe Asp Leu Tyr Asp Asp Ser Gln Leu Cys Gly Ser Ala Thr Ser ctg gag gaa aga cct cgt gcc atc agt cat tcg ggc tca ttc aga Leu Glu Glu Arg Pro Arg Ala Ile Ser His Ser Gly Ser Phe Arg gac agc atg gaa gaa gtt cat ggc tct tca tta tca ctg gtg tcc Asp Ser Met Glu Glu Val His Gly Ser Ser Leu Ser Leu Val Ser agc act tct tct ctt tac tct aca $\,$ gct gaa gaa aag gct $\,$ cat tca $\,$ Ser Thr $\,$ Ser $\,$ Ser Leu $\,$ Tyr Ser $\,$ Thr $\,$ Ala $\,$ Glu $\,$ Glu $\,$ Lys $\,$ Ala $\,$ His $\,$ Ser $\,$ $\,$ 1105 $\,$ gag caa atc cat aaa ctg cgg aga gag ctg gtt gca tca caa gaa Glu Gln Ile His Lys Leu Arg Arg Glu Leu Val Ala Ser Gln Glu aaa gtt gct acc ctc aca tct cag ctt tca gca aat gct cac ctt Lys Val Ala Thr Leu Thr Ser Gln Leu Ser Ala Asn Ala His Leu gta gca gct ttt gaa aag agc tta ggg aat atg act ggc cga ttg Val Ala Ala Phe Glu Lys Ser Leu Gly Asn Met Thr Gly Arg Leu caa agt cta act atg aca gcg gaa caa aag gaa tct gaa ctt ata Gln Ser Leu Thr Met Thr Ala Glu Gln Lys Glu Ser Glu Leu Ile gaa cta aga gaa acc att gaa atg ctg aag gct cag aat tct gct Glu Leu Arg Glu Thr Ile Glu Met Leu Lys Ala Gln Asn Ser Ala gcc Cag gcg gct att cag gga gca ctg aat ggt cca gac cat cct Ala Gln Ala Ala Ile Gln Gly Ala Leu Asn Gly Pro Asp His Pro ccc aaa gat ctt cgc atc aga aga cag cat tcc tct gaa agt gtt Pro Lys Asp Leu Arg Ile Arg Arg Gln His Ser Ser Glu Ser Val 1200 1205 1210

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		atg Met 1290	aag Lys	ccc Pro	tca Ser	caa Gln	tct Ser 1295	gct Ala	tca Ser	gcg Ala	atc Ile	tgt Cys 1300	gaa Glu	tgc Cys	4408
aca Thr	gaa Glu	gct Ala 1305	gag Glu	gca Ala	gag Glu	ata Ile	att Ile 1310	ctg Leu	cag Gln	ctg Leu	aag Lys	agc Ser 1315	gag Glu		4453
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agc Ser	tct Ser	gct Ala 1335	cat His	cat His	ctt Leu	gat Asp	cag Gln 1340	atc Ile	cgg Arg	gaa Glu	gcc Ala	atg Met 1345	aac Asn		4543
atg Met	cag Gln	aat Asn 1350	gaa Glu	att Ile	gaa Glu	ata Ile	ctg Leu 1355	aaa Lys	gct Ala	gaa Glu	aat Asn	gac Asp 1360	cgg Arg		4588
		gaa Glu 1365					gct Ala 1370					cca Pro 1375	ccg Pro		4633
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gga G1y	ctt Leu	tct Ser 1395	cta Leu	aac Asn	aat Asn	ttg Leu	aac Asn 1400	atc Ile	aca Thr	gag Glu	gct Ala	gtt Val 1405	agc Ser		4723
gat Asp	att Ile	ttg Leu 1410	cta Leu	gat Asp	gat Asp	gct Ala	ggt Gly 1415	gat Asp	gca Ala	act Thr	gga Gly	cat His 1420	aaa Lys	-	4768
ggc GTy		agt Ser 1425	gtg Val	aaa Lys	att Ile	ata Ile	gtc Val 1430	tcc Ser	ata Ile	agc Ser	aag Lys	ggc Gly 1435	tat Tyr	- 4	4813
		aag Lys 1440							Tyr				tcc Ser	_	4858

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		ctc Leu 1470													4948
		ggt Gly 1485	ctg Leu	agc Ser	tct Ser	gac Asp	tgc Cys 1490	att Ile	gct Ala	agc Ser	tac Tyr	tgt Cys 1495		gga Gly	4993
gac Asp	tta Leu	att Ile 1500	aga Arg	tcc Ser	cat His	aac Asn	cta Leu 1505	gaa Glu	gtg Val	cct Pro	gaa Glu	ttg Leu 1510	ctg Leu	cct Pro	5038
		tac Tyr 1515					aat Asn 1520							ctc Leu	5083
		gta Val 1530	gaa Glu	gaa Glu	aat Asn	agt Ser	ttg Leu 1535	gac Asp	agt Ser	ttt Phe	gtt Val	ttt Phe 1540	gat Asp		5128
		cct Pro 1545					caa Gln 1550						ttg Leu		5173
	cat His	сас ніs 1560	aga Arg	att Ile	ata Ile	ctc Leu	tca ser 1565	gga Gly	ccg Pro	agt Ser	ggt Gly	act Thr 1570	gga Gly		5218
		ttg Leu 1575	gca Ala	aac Asn	aaa Lys	ctt Leu	gct Ala 1580	gaa Glu	tat Tyr	gta Val	ata Ile	acc Thr 1585	aaa Lys		5263
gga Gly	agg Arg	aaa Lys 1590	aaa Lys	aca Thr	gag Glu	gat Asp	gca Ala 1595	att Ile	gcc Ala	act Thr	ttt Phe	aat Asn 1600	gtg Val	_	5308
		tca Ser 1605	agt Ser	aag Lys	gaa Glu	ttg Leu	caa Gln 1610	caa Gln	tat Tyr	cta Leu	gct Ala	aac Asn 1615	ctg Leu		5353
gaa Glu	cag Gln	tgc Cys 1620	agt Ser	gct Ala	gat Asp	aat Asn	aat Asn 1625	gga Gly	gtg Val	gag Glu	ctc Leu	cca Pro 1630	gtt Val		5398
ata Ile	att Ile	ctt Leu 1635	gat Asp	aat Asn	ctt Leu	cat His	cat His 1640	gtg Val	ggc Gly	tct Ser	ctg Leu	agt Ser 1645	gat Asp	atc Ile	5443
	aat Asn	ggt Gly 1650					aaa Lys 1655						tat Tyr		5488
att Ile	gga Gly	aca Thr 1665	atg Met	aat Asn	cag Gln	gga Gly	gtt Val 1670	tct Ser	tca Ser	tca Ser	cca Pro	aat Asn 1675	cta L eu		5533
	cat His						gta Val		Cys		Asn		aca Thr		5578

Corrected Sequence Listing2.ST25 1680 1690 cca gtg aaa ggc ttt tta ggc aga tat ctt cga aga aaa ctc ata Pro Val Lys Gly Phe Leu Gly Arg Tyr Leu Arg Arg Lys Leu Ile 5623 1705 gag ata gaa att gaa agg aac att cgc aat aat gac cta gtc aaa Glu Ile Glu Ile Glu Arg Asn Ile Arg Asn Asn Asp Leu Val Lys 1710 1715 1720 5668 att ata gat tgg att ccg aag acg tgg cat cat ctc aac agt ttt Ile Ile Asp Trp Ile Pro Lys Thr Trp His His Leu Asn Ser Phe 1725 1730 1735 5713 ttg gaa aca cac agt tct tct gac gtt acc att ggt ccc cga cta Leu Glu Thr His Ser Ser Ser Asp Val Thr Ile Gly Pro Arg Leu 5758 ttc ctt cct tgc ccc atg gat gta gaa ggt tct aga gta tgg ttc Phe Leu Pro Cys Pro Met Asp Val Glu Gly Ser Arg Val Trp Phe 5803 atg gat ctc tgg aac tat tct tta gta cct tat att ctg gag gca Met Asp Leu Trp Asn Tyr Ser Leu Val Pro Tyr Ile Leu Glu Ala 5848 gtg aga gag ggt ctt cag atg tat ggg aaa cgc aca cca tgg gaa Val Arg Glu Gly Leu Gln Met Tyr Gly Lys Arg Thr Pro Trp Glu 1785 1790 1795 5893 gat cct tca aag tgg gtg ctt gac aca tat cca tgg agc tca gca Asp Pro Ser Lys Trp Val Leu Asp Thr Tyr Pro Trp Ser Ser Ala 5938 1800 1805 act ctg cct cag gag agc cca gcc tta ctt cag ctg cga cca gaa Thr Leu Pro Gln Glu Ser Pro Ala Leu Leu Gln Leu Arg Pro Glu 5983 1815 gat gtt ggg tat gaa agc tgc aca tcc act aag gaa gcc aca acc Asp Val Gly Tyr Glu Ser Cys Thr Ser Thr Lys Glu Ala Thr Thr 6028 tca aag cac att cca caa act gac aca gaa gga gat ccc ctg atg Ser Lys His Ile Pro Gln Thr Asp Thr Glu Gly Asp Pro Leu Met 1845 1850 1855 6073 atg aaa ctc caa gaa gca gcc aat tac tcg agc aca 6118 aat atg cta Asn Met Leu Met Lys Leu Gln Glu Ála Ála Asn Tyr Ser 1865 caa agc tgc gac agc gaa agc acc agt cac cat gaa gac att ttg Gln Ser Cys Asp Ser Glu Ser Thr Ser His His Glu Asp Ile Leu 6163 6207 gat tca tct ctt gaa tct acc ctc tagagggtga aaaaagttaa Asp Ser Ser Leu Ğlu Ser Thr Leu 1890 gggaaaagac tttgctttta aaaaaatgtt tcaaaagaaa ggtattttca ctaaaccact 6267 6327 gccagtataa aagcaccctg tcaagggccc tgacccagag ttgtggtctc caaggaggca gcagaactaa gtctgaaccg ccaagatgct aaattgcaat ggaagcttaa ctttagttta 6387 Page 22

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Corrected Sequence Listing2.ST25 agtgactagt ttcccttgta taatatgtga tctaagaaaa ttgctaatct ttccctgcca ttttgagaaa cacagtccaa acatgagcat aaacagaatt tcctgcaata catcccagta ggtccaccta gtttacaact taaactagtt tgtgaaacat ttgtctgtat acattttata ttttgtacat tttgatgtaa catatcatgt aaataggcag aaacagtgaa ataaatcatc tgaaaagttt tgtagtcttt gtaaagcccc aacaataagt acttggtgtc aatggactta actggatgat gtattttcta ttggtttatt gttcctctag cttgtaaacc agcttgcata tatttttttg caaatgtgca ccctgtatct gtctaaatta ttactttgcc attaaagtgg aattatttat tgacaaaaaa aaa <210> 12 1895 <211> <212> PRT <213> Homo sapiens <400> 12 Met Asp Leu Ser Ser Glu Met Asn Arg His Gly Lys Asn Pro Val Ser $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$ His Lys Leu Glu Asp Gln Lys Lys Ile Tyr Thr Asp Trp Ala Asn His 20 25 30 Tyr Leu Ala Lys Ser Gly His Lys Arg Leu Ile Lys Asp Leu Gln Gln 35 40 45 Asp Ile Ala Asp Gly Val Leu Leu Ala Glu Ile Ile Gln Ile Ile Ala 50 55 60 Asn Glu Lys Val Glu Asp Ile Asn Gly Cys Pro Arg Ser Gln Ser Gln 65 70 75 80 Met Ile Glu Asn Val Asp Val Cys Leu Ser Phe Leu Ala Ala Arg Gly 85 90 95 Val Asn Val Gln Gly Leu Ser Ala Glu Glu Ile Arg Asn Gly Asn Leu 100 105 110 Lys Ala Ile Leu Gly Leu Phe Phe Ser Leu Ser Arg Tyr Lys Gln Gln 115 120 125 Gln His His Gln Gln Gln Tyr Tyr Gln Ser Leu Val Glu Leu Gln Gln 130 135 140

Arg Val Thr His Ala Ser Pro Pro Ser Glu Ala Ser Gln Ala Lys Thr 150 150 155 160

8307

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8547

8607 8667

8690

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Asp Ser Trp Asp Asp Ser Ser Ser Val Ser Ser Gly Leu Ser Asp Thr 420 425 430 Leu Asp Asn Ile Ser Thr Asp Asp Leu Asn Thr Thr Ser Ser Val Ser 435 440 445 Ser Tyr Ser Asn Ile Thr Val Pro Ser Arg Lys Asn Thr Gln Leu Arg 450 455 460 Thr Asp Ser Glu Lys Arg Ser Thr Thr Asp Glu Thr Trp Asp Ser Pro 465 470 475 480 Glu Glu Leu Lys Lys Pro Glu Glu Asp Phe Asp Ser His Gly Asp Ala 485 490 495 Gly Gly Lys Trp Lys Thr Val Ser Ser Gly Leu Pro Glu Asp Pro Glu 500 505 510Lys Ala Gly Gln Lys Ala Ser Leu Ser Val Ser Gln Thr Gly Ser Trp 515 520 525 Arg Arg Gly Met Ser Ala Gln Gly Gly Ala Pro Ser Arg Gln Lys Ala 530 540 Gly Thr Ser Ala Leu Lys Thr Pro Gly Lys Thr Asp Asp Ala Lys Ala 545 550 555 560 Ser Glu Lys Gly Lys Ala Pro Leu Lys Gly Ser Ser Leu Gln Arg Ser 565 570 575 Pro Ser Asp Ala Gly Lys Ser Ser Gly Asp Glu Gly Lys Lys Pro Pro 580 585 590 Ser Gly Ile Gly Arg Ser Thr Ala Thr Ser Ser Phe Gly Phe Lys Lys 595 600 Pro Ser Gly Val Gly Ser Ser Ala Met Ile Thr Ser Ser Gly Ala Thr 610 620 Ile Thr Ser Gly Ser Ala Thr Leu Gly Lys Ile Pro Lys Ser Ala Ala 625 630 635 640 Ile Gly Gly Lys Ser Asn Ala Gly Arg Lys Thr Ser Leu Asp Gly Ser 645 650 655 Gln Asn Gln Asp Asp Val Val Leu His Val Ser Ser Lys Thr Thr Leu Page 26

Gln Tyr Arg Ser Leu Pro Arg Pro Ser Lys Ser Ser Thr Ser Gly Ile 675 680 685 Pro Gly Arg Gly His Arg Ser Ser Thr Ser Ser Ile Asp Ser Asn 690 695 700 val Ser Ser Lys Ser Ala Gly Ala Thr Thr Ser Lys Leu Arg Glu Pro 705 710 715 720 Thr Lys Ile Gly Ser Gly Arg Ser Ser Pro Val Thr Val Asn Gln Thr 725 730 735 Asp Lys Glu Lys Glu Lys Val Ala Val Ser Asp Ser Glu Ser Val Ser 740 745 750 Leu Ser Gly Ser Pro Lys Ser Ser Pro Thr Ser Ala Ser Ala Cys Gly
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660

Corrected Sequence Listing2.ST25 Glu Ser Ile Asp Leu Pro Leu Ser His His Gly Ser Leu Ser Gly Leu Thr Thr Gly Thr His Glu Val Gln Ser Leu Leu Met Arg Thr Gly Ser Val Arg Ser Thr Leu Ser Glu Ser Met Gln Leu Asp Arg Asn Thr Leu Pro Lys Lys Gly Leu Arg Tyr Thr Pro Ser Ser Arg Gln Ala Asn Gln Glu Glu Gly Lys Glu Trp Leu Arg Ser His Ser Thr Gly Gly Leu Gln 980 985 990 Asp Thr Gly Asn Gln Ser Pro Leu Val Ser Pro Ser Ala Met Ser Ser 995 1000 1005 Ser Ala Ala Gly Lys Tyr His Phe Ser Asn Leu Val Ser Pro Thr Asn Leu Ser Gln Phe Asn Leu Pro Gly Pro Ser Met Met Arg Ser 1025 1030 1035 Asn Ser Ile Pro Ala Gln Asp Ser Ser Phe Asp Leu Tyr Asp Asp Ser Gln Leu Cys Gly Ser Ala Thr Ser Leu Glu Glu Arg Pro Arg Ala Ile Ser His Ser Gly Ser Phe Arg Asp Ser Met Glu Glu Val 1075 1070 His Gly Ser Ser Leu Ser Leu Val Ser Ser Thr Ser Ser Leu Tyr 1085 1090 1095 Ser Thr Ala Glu Glu Lys Ala His Ser Glu Gln Ile His Lys Leu 1100 Arg Arg Glu Leu Val Ala Ser Gln Glu Lys Val Ala Thr Leu Thr 1120 Ser Gln Leu Ser Ala Asn Ala His Leu Val Ala Ala Phe Glu Lys 1130 1140 1130

Ser Leu Gly Asn Met Thr Gly Arg Leu Gln Ser Leu Thr Met Thr

Ala Glu Gln Lys Glu Ser Glu Leu Ile Glu Leu Arg Glu Thr Ile 1160 1165 Glu Met Leu Lys Ala Gln Asn Ser Ala Ala Gln Ala Ala Ile Gln 1175 1180 Gly Ala Leu Asn Gly Pro Asp His Pro Pro Lys Asp Leu Arg Ile 1190 1200 Arg Arg Gln His Ser Ser Glu Ser Val Ser Ser Ile Asn Ser Ala 1205 1210 Thr Ser His Ser Ser Ile Gly Ser Gly Asn Asp Ala Asp Ser Lys 1220 1225 1230 Lys Lys Lys Lys Asn Trp Leu Arg Ser Ser Phe Lys Gln Ala Phe Gly Lys Lys Lys Ser Thr Lys Pro Pro Ser Ser His Ser Asp Ile Glu Glu Leu Thr Asp Ser Ser Leu Pro Ala Ser Pro Lys Leu Pro His Asn Ala Gly Asp Cys Gly Ser Ala Ser Met Lys Pro Ser 1280 1285 1290 1280 1290 Gln Ser Ala Ser Ala Ile Cys Glu Cys Thr Glu Ala Glu Ala Glu 1295 1300 1305 1295 Ile Ile Leu Gl
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1390

Page 29

- Leu Asn Ile Thr Glu Ala Val Ser Ser Asp Ile Leu Leu Asp Asp 1400 1405 1410
- Ala Gly Asp Ala Thr Gly His Lys Asp Gly Arg Ser Val Lys Ile 1415 1420 1425
- Ile Val Ser Ile Ser Lys Gly Tyr Gly Arg Ala Lys Asp Gln Lys 1430 1440
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- Asn Asn Gly Val Glu Leu Pro Val Val Ile Ile Leu Asp Asn Leu Page 30

Corrected Sequence Listing2.ST25 1630 1635

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1625

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Gly Arg Tyr Leu Arg Arg Lys Leu Ile Glu Ile Glu Ile Glu Arg 1700 1705 1710

Asn Ile Arg Asn Asn Asp Leu Val Lys Ile Ile Asp Trp Ile Pro 1715 1720 1725

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Asp Val Glu Gly Ser Arg Val Trp Phe Met Asp Leu Trp Asn Tyr 1760 1765 1770

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Pro Ala Leu Leu Gln Leu Arg Pro Glu Asp Val Gly Tyr Glu Ser 1820 1825 1830

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1320

1380

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Page 48

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755 760 765 Phe Asn Leu Pro Ala Pro Ser Met Met Arg Ser Ser Ser Ile Pro Ala Page 49

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Phe Arg Asp Ser Met Glu Glu Val His Gly Ser Ser Leu Ser Leu Val 820 830

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Thr Met Thr Ala Glu Gln Lys Glu Ser Glu Leu Ile Glu Leu Arg Glu 900 905 910

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aag ctg tac cac ctg ccc cca ccc acc gtg ggc cct cac agc att Lys Leu Tyr His Leu Pro Pro Pro Thr Val Gly Pro His Ser Ile 1910 1915 1920	5769
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tct ctg gac tca gat cct ctg atg gcc atg ctg ctg aaa ctt caa Ser Leu Asp Ser Asp Pro Leu Met Ala Met Leu Leu Lys Leu Gln 1940 1945 1950	5859
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gac ccc aac ctt cag gca aca ctt taagggttcg gcaatcactg Asp Pro Asn Leu Gln Ala Thr Leu 1970 1975	5948
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Corrected Sequence Listing2.ST25
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Leu Pro Arg Ser Leu Pro Leu Leu Ser Pro Ser Ser Ser Val Ser Ser 50 55
Val Leu Ser Leu Pro Leu Leu Leu Pro Arg Leu Leu Leu Leu Arg Ser
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6608 6668

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6768

Corrected Sequence Listing2.ST25
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Met Leu Asp Pro Glu Ser Gln Arg Lys Arg Thr Val Gln Asn Val Leu 355 360 365

Asp Leu Arg Gln Asn Leu Glu Glu Thr Met Ser Ser Leu Arg Gly Ser 370 375 380

Gln Val Thr His Ser Ser Leu Glu Met Thr Cys Tyr Asp Ser Asp Asp 385 390 395 400

Ala Asn Pro Arg Ser Val Ser Ser Leu Ser Asn Arg Ser Tyr Pro Leu 405 410 415

Ser Trp Arg Tyr Gly Gln Ser Ser Pro Arg Leu Gln Ala Gly Asp Ala 420 425 430

Pro Ser Val Gly Gly Ser Cys Arg Ser Glu Gly Thr Pro Ala Trp Tyr 435 440 445

Met His Gly Glu Arg Ala His Tyr Ser His Thr Met Pro Met Arg Ser 450 455 460

Pro Ser Lys Leu Ser His Ile Ser Arg Leu Glu Leu Val Glu Ser Leu 465 470 480

Asp Ser Asp Glu Val Asp Leu Lys Ser Gly Tyr Met Ser Asp Ser Asp 485 490 495

Leu Met Gly Lys Thr Met Thr Glu Asp Asp Ile Thr Thr Gly Trp 500 510

Asp Glu Ser Ser Ser Ile Ser Ser Gly Leu Ser Asp Ala Ser Asp Asn 515 520 525

Leu Ser Ser Glu Glu Phe Asn Ala Ser Ser Ser Leu Asn Ser Leu Pro 530 540

Ser Thr Pro Thr Ala Ser Arg Arg Asn Ser Thr Ile Val Leu Arg Thr 545 550 555 560

Asp Ser Glu Lys Arg Ser Leu Ala Glu Ser Gly Leu Ser Trp Phe Ser 575

Glu Ser Glu Glu Lys Ala Pro Lys Lys Leu Glu Tyr Asp Ser Gly Ser 580 585 590

Leu Lys Met Glu Pro Gly Thr Ser Lys Trp Arg Arg Glu Arg Pro Glu 595 600 605
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Ser Cys Asp Asp Ser Ser Lys Gly Glu Leu Lys Lys Pro Ile Ser 610 620 Leu Gly His Pro Gly Ser Leu Lys Lys Gly Lys Thr Pro Pro Val Ala 625 630 635 640 Val Thr Ser Pro Ile Thr His Thr Ala Gln Ser Ala Leu Lys Val Ala 645 650 655 Gly Lys Pro Glu Gly Lys Ala Thr Asp Lys Gly Lys Leu Ala Val Lys 660 670 Asn Thr Gly Leu Gln Arg Ser Ser Ser Asp Ala Gly Arg Asp Arg Leu 675 680 685 Ser Asp Ala Lys Lys Pro Pro Ser Gly Ile Ala Arg Pro Ser Thr Ser 690 695 700 Gly Ser Phe Gly Tyr Lys Lys Pro Pro Pro Ala Thr Gly Thr Ala Thr 705 710 715 720 Val Met Gln Thr Gly Gly Ser Ala Thr Leu Ser Lys Ile Gln Lys Ser 725 730 735 Ser Gly Ile Pro Val Lys Pro Val Asn Gly Arg Lys Thr Ser Leu Asp 740 745 750 Val Ser Asn Ser Ala Glu Pro Gly Phe Leu Ala Pro Gly Ala Arg Ser 755 760 765 Asn Ile Gln Tyr Arg Ser Leu Pro Arg Pro Ala Lys Ser Ser Ser Met 770 780 Ser Val Thr Gly Gly Arg Gly Gly Pro Arg Pro Val Ser Ser Ser Ile 785 790 795 800 Asp Pro Ser Leu Leu Ser Thr Lys Gln Gly Gly Leu Thr Pro Ser Arg 805 810 815 Leu Lys Glu Pro Thr Lys Val Ala Ser Gly Arg Thr Thr Pro Ala Pro 820 825 830 Val Asn Gln Thr Asp Arg Glu Lys Glu Lys Ala Lys Ala Lys Ala Val 835 840 845 Ala Leu Asp Ser Asp Asn Ile Ser Leu Lys Ser Ile Gly Ser Pro Glu Page 64

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Leu Pro Ser Ser Ser Asp Thr Thr His Ala Ser Lys Val Pro Asp Leu 915 920 925

His Ala Thr Ser Ser Ala Ser Gly Gly Pro Leu Pro Ser Cys Phe Thr 930 935 940

Pro Ser Pro Ala Pro Ile Leu Asn Ile Asn Ser Ala Ser Phe Ser Gln 945 950 955 960

Gly Leu Glu Leu Met Ser Gly Phe Ser Val Pro Lys Glu Thr Arg Met 965 970 975

Tyr Pro Lys Leu Ser Gly Leu His Arg Ser Met Glu Ser Leu Gln Met 980 985 990

Pro Met Ser Leu Pro Ser Ala Phe Pro Ser Ser Thr Pro Val Pro Thr 995 1000

Pro Pro Ala Pro Pro Ala Ala Pro Thr Glu Glu Glu Thr Glu Glu 1010 1020

Leu Thr Trp Ser Gly Ser Pro Arg Ala Gly Gln Leu Asp Ser Asn 1025 1030 1035

Gln Arg Asp Arg Asn Thr Leu Pro Lys Lys Gly Leu Arg Tyr Gln 1040 1045 1050

Leu Gln Ser Gln Glu Glu Thr Lys Glu Arg Arg His Ser His Thr 1055 1060

Ile Gly Gly Leu Pro Glu Ser Asp Gln Ser Glu Leu Pro Ser 1070 1075 1080

Pro Pro Ala Leu Pro Met Ser Leu Ser Ala Lys Gly Gln Leu Thr 1085 1090 1095

Corrected Sequence Listing2.ST25 Ash Ile Val Ser Pro Thr Ala Ala Thr Thr Pro Arg Ile Thr Arg Ser Asn Ser Ile Pro Thr His Glu Ala Ala Phe Glu Leu Tyr Ser Gly Ser Gln Met Gly Ser Thr Leu Ser Leu Ala Glu Arg Pro Lys 1130 1140Gly Met Ile Arg Ser Gly Ser Phe Arg Asp Pro Thr Asp Asp Val 1145 1150 His Gly Ser Val Leu Ser Leu Ala Ser Ser Ala Ser Ser Thr Tyr Ser Ser Ala Glu Glu Arg Met Gln Ser Glu Gln Ile Arg Lys Leu Arg Arg Glu Leu Glu Ser Ser Gln Glu Lys Val Ala Thr Leu Thr 1190 1200 11<u>9</u>0 Ser Gln Leu Ser Ala Asn Ala Asn Leu Val Ala Ala Phe Glu Gln Ser Leu Val Asn Met Thr Ser Arg Leu Arg His Leu Ala Glu Thr Ala Glu Glu Lys Asp Thr Glu Leu Leu Asp Leu Arg Glu Thr Ile 1235 1240 1245 1240 Asp Phe Leu Lys Lys Lys Asn Ser Glu Ala Gln Ala Val Ile Gln 1250 1255 Gly Ala Leu Asn Ala Ser Glu Thr Thr Pro Lys Glu Leu Arg Ile 1265 Lys Arg Gln Asn Ser Ser Asp Ser Ile Ser Ser Leu Asn Ser Ile 1280 1285 1290 Thr Ser His Ser Ser Ile Gly Ser Ser Lys Asp Ala Asp Ala Lys 1295 1300 1305 Lys Lys Lys Lys Ser Trp Leu Arg Ser Ser Phe Asn Lys Ala Phe Ser Ile Lys Lys Gly Pro Lys Ser Ala Ser Ser Tyr Ser Asp 1330

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- Ala His Pro Ala Pro His Thr Arg Leu Phe His Ala Asn Glu Glu 1385 1390 1395
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- Trp Glu Lys Glu Met Lys Leu Thr Asp Ile Arg Leu Glu Ala Leu 1415 1425
- Asn Ser Ala His Gln Leu Asp Gln Leu Arg Glu Thr Met His Asn 1430 1435 1440
- Met Gln Leu Glu Val Asp Leu Leu Glu Ala Glu Asn Asp Arg Leu 1445 1450
- Lys Val Ala Pro Gly Pro Ser Ser Gly Ser Thr Pro Gly Gln Val 1460 1465 1470
- Pro Gly Ser Ser Ala Leu Ser Ser Pro Arg Arg Ser Leu Gly Leu 1475 1480 1485
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- Ser Pro Met Asp Gly Ile Ser Thr Cys Gly Pro Lys Glu Glu Val 1505 1510 1515
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- Val Phe Lys Asp Tyr Ile Ser Lys Met Asp Pro Ala Ser Thr Leu 1565 1570 1575 Page 67

Gly Leu Ser Thr Glu Ser Ile His Gly Tyr Ser Ile Ser His Val 1580 Lys Arg Val Leu Asp Ala Glu Pro Pro Glu Met Pro Pro Cys Arg 1595 1600 1600 Arg Gly Val Asn Asn Ile Ser Val Ser Leu Lys Gly Leu Lys Glu 1610 1615 1620 1620 Lys Cys Val Asp Ser Leu Val Phe Glu Thr Leu Ile Pro Lys Pro
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Page 68

Pro Lys Leu Trp Tyr His Leu His Thr Phe Leu Glu Lys His Ser 1820 1825 1830

Thr Ser Asp Phe Leu Ile Gly Pro Cys Phe Phe Leu Ser Cys Pro

Asn Ser Ile Ile Pro Tyr Leu Gln Glu Gly Ala Lys Asp Gly Ile 1870

Lys Val His Gly Gln Lys Ala Ala Trp Glu Asp Pro Val Glu Trp

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Lys Leu Tyr His Leu Pro Pro Pro Thr Val Gly Pro His Ser Ile 1915 1910

Ala Ser Pro Pro Glu Asp Arg Thr Val Lys Asp Ser Thr Pro Ser 1925 1930 1935

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97

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					aac Asn 230											721
					gtc Val											769
					gca Ala											817

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aag Lys	tca ser 1115	agt Ser	atg Met	gat Asp	ggg Gly	gct Ala 1120	cag Gln	aat Asn	cag Gln	gat Asp	gac Asp 1125	ggg Gly	tat Tyr	cta Leu	3385
	cta Leu 1130	agc Ser	tcc Ser	cgg Arg	aca Thr	aac Asn 1135	ctt Leu	cag Gln	tac Tyr	cgg Arg	agt ser 1140	ttg Leu	ccg Pro	agg Arg	3430
CCC Pro	agt Ser 1145	aag Lys	tcc Ser	aac Asn	agc Ser	cgg Arg 1150	aac Asn	ggg Gly	gct Ala	ggg Gly	aac Asn 1155	agg Arg	tct Ser	agc Ser	3475
	agc Ser 1160	agc Ser	ata Ile	gat Asp	tcc ser	aac Asn 1165	att Ile	agc Ser	agc Ser	aag Lys	tcc Ser 1170	gca Ala	ggc Gly	ctg Leu	3520
cca Pro	gtg Val 1175	ccc Pro	aaa Lys	ctg Leu	agg Arg	gag Glu 1180	cct Pro	tcc Ser	aaa Lys	aca Thr	gcc Ala 1185	cta Leu	ggc Gly	agc Ser	3565
	cta Leu 1190	cca Pro	ggt Gly	ctg Leu	gtc Val	aac Asn 1195	caa Gln	aca Thr	gac Asp	aag Lys	gag Glu 1200	aaa Lys	ggc Gly	atc Ile	3610
	tca Ser 1205	gac Asp	aac Asn	gag Glu	agt Ser	gtg Val 1210	gct Ala	tcc Ser	tgt Cys	aac Asn	tcg Ser 1215	gtg Val	aaa Lys	gtg Val	3655
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	cct Pro 1235	gga Gly	gcc Ala	aag Lys	tac Tyr	cca Pro 1240	gat Asp	gtg Val	gcc Ala	tct Ser	ccc Pro 1245	aca Thr	ctc Leu	cgc Arg	3745
aga Arg	ctc Leu 1250	ttt Phe	ggt Gly	ggg Gly	aag Lys	cct Pro 1255	acc Thr	aag Lys	caa Gln	gtg Val	ccc Pro 1260	atc Ile	gcc Ala	aca Thr	3790

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gct Ala	gaa Glu 1265	Asn	atg Met	aaa Lys	aat Asn	tca	gtg Val	qtc	atc	tcc	Listi aat Asn 1275	cct	cat	gcc Ala	3835
acc Thr	atg Met 1280	Thr	cag Gln	caa Gln	ggt Gly	aac Asn 1285	Leu	gac Asp	tcc Ser	ccg Pro	tca Ser 1290	ggc Gly	agt Ser	ggc Gly	3880
gtc val	ctg Leu 1295	Ser	agt Ser	ggg Gly	agc Ser	agc Ser 1300	agt Ser	cct Pro	ctc Leu	tac Tyr	agc ser 1305	aag Lys	aat Asn	gtg Val	3925
gac Asp	ctc Leu 1310	Asn	cag Gln	tct Ser	ccg Pro	cta Leu 1315	gcc Ala	tcc Ser	agc Ser	ccc Pro	agc Ser 1320	tca Ser	gcc Ala	cac His	3970
tcg Ser	gcc Ala 1325	Pro	tcc Ser	aac Asn	agc Ser	ctc Leu 1330	acc Thr	tgg Trp	ggc Gly	acc Thr	aac Asn 1335	gcc Ala	agc Ser	agc Ser	4015
tcc Ser	tcc ser 1340	gca Ala	gtt val	agc Ser	aag Lys	gat Asp 1345	ggc Gly	ctg Leu	ggc Gly	ttt Phe	cag Gln 1350	tct Ser	gtc val	agc Ser	4060
agc Ser	ctc Leu 1355	cac His	acc Thr	agc ser	tgt Cys	gag Glu 1360	tcc ser	atc Ile	gac Asp	atc Ile	tcc ser 1365	ctc Leu	agc Ser	agt Ser	4105
gga Gly	ggg Gly 1370	gtc Val	ccc Pro	agc Ser	cac His	aat Asn 1375	tct Ser	tcc Ser	act Thr	ggc Gly	ctc Leu 1380	atc Ile	gcc Ala	tcc Ser	4150
											act Thr 1395				4195
aag Lys	acc Thr 1400	aca Thr	ctg Leu	tca Ser	gaa Glu	agc Ser 1405	cct Pro	ctc Leu	tct Ser	tcc Ser	cct Pro 1410	gct Ala	gct Ala	agc Ser	4240
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	cac His 1430	ctt Leu	gat Asp	agg Arg	aac Asn	act Thr 1435	ttg Leu	cct Pro	aag Lys	aaa Lys	gga Gly 1440	ctc L eu	agg Arg	tat Tyr	4330
	ccc Pro 1445	acc Thr	tcc Ser	cag Gln	ctt Leu	cgc Arg 1450	acg Thr	caa Gln	gaa Glu	gat Asp	gca Ala 1455	aaa Lys	gaa Glu	tgg Trp	4375
	cgg Arg 1460	tcc Ser	cat His	tct Ser	gca Ala	gga Gly 1465	ggc Gly	ctt Leu	cag Gln	gac Asp	acc Thr 1470	gct Ala	gcc Ala	aat Asn	4420
	ccc Pro 1475	ttt Phe	tcc Ser	tct Ser	ggc Gly	tcc Ser 1480	agc Ser	gtg Val	act Thr	tct Ser	ccc Pro 1485	tcc Ser	gga Gly	aca Thr	4465
aga Arg	ttc Phe 1490	aac Asn	ttt Phe	tcc Ser	cag Gln	ctt Leu 1495	gcg Ala	agt Ser	Pro	acc Thr e 75	act Thr 1500	gtc Val	acc Thr	cag Gln	4510

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aat Asn	gct Ala 1520	gat Asp	ggg Gly	cag Gln	tat Tyr	gat Asp 1525	cca Pro	tac Tyr	act Thr	gac Asp	agc ser 1530	cgc Arg	ttc Phe	cgg Arg	4600
	agc Ser 1535	tcc Ser	atg Met	tcc Ser	ctg Leu	gat Asp 1540	gag Glu	aag Lys	agc Ser	aga Arg	acc Thr 1545		agc Ser	_	4645
	ggc Gly 1550	tca Ser	ttc Phe	cgg Arg	gat Asp	ggg Gly 1555	ttt Phe	gaa Glu	gaa Glu	gtt Val	cat His 1560	gga Gly	tcc Ser		4690
ctc Leu	tcc Ser 1565	ttg Leu	gtt val	tcc Ser	agc Ser	aca Thr 1570	tcg Ser	tca Ser	gtt Val	tat Tyr	tct ser 1575	aca Thr	cca Pro	gaa Glu	4735
	aaa Lys 1580	tgc Cys	cag G1n	tca ser	gag Glu	att Ile 1585	cgc Arg	aag Lys	ctg Leu	cgg Arg	cgg Arg 1590		ctg Leu		4780
	tcc Ser 1595	cag Gln	gag Glu	aaa Lys	gtt Val	tca Ser 1600	gct Ala	ttg Leu	acc Thr	acc Thr	cag Gln 1605	ctg Leu	aca Thr	gca Ala	4825
aat Asn	gct Ala 1610	cac His	ctt Leu	gtg Val	gct Ala	gcc Ala 1615	ttt Phe	gaa Glu	cag Gln	agt Ser	ctt Leu 1620	ggt Gly	aac Asn	atg Met	4870
	atc Ile 1625	agg Arg	ctc Leu	cag Gln	agt Ser	ctg Leu 1630	acc Thr	atg Met	aca Thr	gct Ala	gag Glu 1635	cag Gln	aag Lys		4915
	gaa Glu 1640	ctg Leu	aat Asn	gag Glu	tta Leu	aga Arg 1645	aaa Lys	acc Thr	att Ile	gag Glu	ctg Leu 1650	cta Leu	aag Lys	aaa Lys	4960
	aac Asn 1655	gca Ala	gct Ala	gcc Ala	cag Gln	gct Ala 1660	gcc Ala	att Ile	aat Asn	gga Gly	gta Val 1665		aac Asn		5005
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	cgc Arg 1685	atc Ile	cgc Arg	agg Arg	cag Gln	сас Ніѕ 1690	tcc ser	tca Ser	gac Asp	agc Ser	gtc Val 1695		agc Ser		5095
	agt Ser 1700	gcc Ala	acc Thr	agc ser	cac His	tcc ser 1705	agt Ser	gtg Val	ggc Gly	agc Ser	aac Asn 1710		gag Glu		5140
gac Asp	tca Ser 1715	aag Lys	aag Lys	aag Lys	aag Lys	agg Arg 1720	aag Lys	aac Asn	tgg Trp	gtc Val	aat Asn 1725	gag Glu	tta Leu		5185
_	tcc Ser	ttc Phe	aag Lys	caa Gln	gct Ala	ttc Phe	ggg Gly	aag Lys	Lys	aag Lys e 76	ser		aaa Lys		5230

	1730					Cor 1735	rect	ed So	equer	nce l	isti 1740	ng2 . s	sт25		
gcg Ala	tcc Ser 1745	tct Ser	cat His	tca Ser	gat Asp	att Ile 1750	gag Glu	gag Glu	atg Met	acg Thr	gat Asp 1755	tct Ser	tct Ser		5275
	tcc Ser 1760	tca Ser	cca Pro	aag Lys	tta Leu	cca Pro 1765	cac His	aat Asn	ggg Gly	tcc Ser	aca Thr 1770	ggt Gly	tcc ser	acc Thr	5320
cca Pro	ctg Leu 1775	ctg Leu	agg Arg	aat Asn	tct Ser	сас ніs 1780	tcc Ser	aac Asn	tct Ser	cta Leu	att Ile 1785	tca Ser	gaa Glu	tgc Cys	5365
	gat Asp 1790	agt Ser	gaa Glu	gct Ala	gag Glu	acc Thr 1795	gtc val	atg Met	cag Gln	ctc Leu	cga Arg 1800	aat Asn	gag Glu		5410
aga Arg	gac Asp 1805	aag Lys	gag Glu	atg Met	aag Lys	ctg Leu 1810	aca Thr	gat Asp	atc Ile	cgc Arg	tta Leu 1815	gaa Glu	gct Ala	ctc Leu	5455
	tct Ser 1820	gcc Ala	cac His	cag Gln	ctg Leu	gac Asp 1825	cag Gln	ctc Leu	cgg Arg	gag Glu	gcc Ala 1830	atg Met	aac Asn		5500
	cag Gln 1835	agt Ser	gaa Glu	ata Ile	gag Glu	aag Lys 1840	ctg Leu	aaa Lys	gct Ala	gag Glu	aat Asn 1845	gat Asp	cgg Arg	ctg Leu	5545
	tca ser 1850	gag Glu	tct Ser	caa Gln	ggc Gly	agt Ser 1855	ggc Gly	tgc Cys	agc Ser	cgg Arg	gct Ala 1860	cct Pro	tcc Ser	caa Gln	5590
	tcc Ser 1865	atc Ile	tct Ser	gcc Ala	tcc Ser	ccg Pro 1870	agg Arg	cag Gln	tcc Ser	atg Met	ggc Gly 1875		tcc Ser		5635
cac His	agc Ser 1880	ttg Leu	aac Asn	ctc Leu	act Thr	gag Glu 1885	tca Ser	acc Thr	agc Ser	ctg Leu	gac Asp 1890	atg Met	ttg Leu	_	5680
gat Asp	gac Asp 1895	act Thr	ggt Gly	gaa Glu	tgc Cys	tcg Ser 1900	gct Ala	cgg Arg	aag Lys	gaa Glu	gga Gly 1905	ggc Gly	agg Arg	cat His	5725
	aag Lys 1910	ata Ile	gtt Val	gtc Val	agc Ser	ttt Phe 1915	cag G1n	gag Glu	gaa Glu	atg Met	aag Lys 1920	tgg Trp	aag Lys	gag Glu	5770
	tcc ser 1925	aga Arg	cca Pro	cat His	ctc Leu	ttt Phe 1930	ctt Leu	att Ile	ggc Gly	tgc Cys	att Ile 1935	gga Gly	gtt Val		5815
-	aag Lys 1940	acg Thr	aag Lys	tgg Trp	gat Asp	gtg Val 1945	ctc Leu	gat Asp	ggg Gly	gtg val	gtt val 1950	aga Arg	cgg Arg		5860
	aaa Lys 1955	gaa Glu	tac Tyr	atc Ile	att Ile	cat His 1960	gtc Val	gac Asp	cca Pro	gtg Val	agt ser 1965		cta Leu		5905
ctg	aat	tca	gac	agc	gtt	ctt	ggc	tac	agc Pag	att e 77	gga	gaa	atc	aag	5950

Leu	Asn 1970	Ser	Asp	ser	va1	Cori Leu 1975					_isti Gly 1980			Lys	
cgc Arg	agc Ser 1985	aac Asn	act Thr	tcc Ser	gaa Glu	aca Thr 1990	ccg Pro	gag Glu	ctg Leu	ctt Leu	cct Pro 1995	tgt Cys	ggc Gly	tat Tyr	5995
	gtt Val 2000	gga Gly	gag Glu	aac Asn	acg Thr	acc Thr 2005	atc Ile	tca Ser	gtg Val	act Thr	gtg Val 2010	aaa Lys	ggg Gly	ctc Leu	6040
gca Ala	gaa Glu 2015	aac Asn	agc Ser	ctg Leu	gac Asp	tca Ser 2020	ctg Leu	gtg Val	ttt Phe	gag Glu	tcc ser 2025	ttg Leu	att Ile	ccc Pro	6085
_	ccc Pro 2030	atc Ile	ctg Leu	cag Gln	cgc Arg	tac Tyr 2035	gtc val	tcc Ser	ctc Leu	ctg Leu	ata Ile 2040	gag Glu	cac His	cgt Arg	6130
cgg Arg	atc Ile 2045	att Ile	ctc Leu	tct Ser	ggc Gly	ccc Pro 2050	agc Ser	ggc Gly	act Thr	ggg Gly	aaa Lys 2055	acc Thr	tac Tyr	ctg Leu	6175
gcc Ala	aac Asn 2060	cgg Arg	ctg Leu	tct Ser	gag Glu	tat Tyr 2065	ata Ile	gtg val	ctt Leu	cga Arg	gag Glu 2070	gga Gly	cgg Arg		6220
	aca Thr 2075	gac Asp	ggg Gly	gtt val	atc Ile	gcc Ala 2080	acc Thr	ttt Phe	aac Asn	gtg Val	gac Asp 2085	cat His	aag Lys		6265
_	aag Lys 2090	gaa Glu	ttg Leu	cgc Arg	cag Gln	tac Tyr 2095	ctg Leu	tcc Ser	aac Asn	ctt Leu	gct Ala 2100	gac Asp	cag Gln	tgc Cys	6310
aac Asn	agt ser 2105	gag Glu	aac Asn	aat Asn	gct Ala	gtg Val 2110	gac Asp	atg Met	ccc Pro	ctc Leu	gtc Val 2115	atc Ile	atc Ile	ctg Leu	6355
gac Asp	aac Asn 2120	cta Leu	cac His	cac His	gtg Val	agc ser 2125	tct Ser	ctg Leu	ggc Gly	gag Glu	atc Ile 2130	ttc Phe	aat Asn	ggg Gly	6400
ctg Leu	ctc Leu 2135	aac Asn	tgc Cys	aag Lys	tac Tyr	cac His 2140	aaa Lys	tgc Cys	cct Pro	tac Tyr	ata Ile 2145	att Ile	ggc Gly	aca Thr	6445
atg Met	aac Asn 2150	cag Gln	gct Ala	acc Thr	tct Ser	tcg Ser 2155	act Thr	ccc Pro	aac Asn	ctg Leu	cag Gln 2160	ctt Leu	cac His	cat His	6490
aac Asn	ttc Phe 2165	aga Arg	tgg Trp	gtg Val	ctt Leu	tgt Cys 2170	gcc Ala	aac Asn	cac His	acg Thr	gag Glu 2175	cct Pro	gtg val		6535
ggt Gly	ttc Phe 2180	ctt Leu	ggc Gly	cga Arg	ttc Phe	ctg Leu 2185	agg Arg	agg Arg	aag Lys	ctc Leu	atg Met 2190	gaa Glu	aca Thr	gag Glu	6580
atc Ile	agt ser 2195	ggg Gly	cgg Arg	gtg Val	cgc Arg	aat Asn 2200	atg Met	gag Glu	ctg Leu	gta Val	aaa Lys 2205	atc Ile	att Ile	gac Asp	6625

Corrected Sequence Listing2.ST25 tgg att ccc aag gtc tgg cat cac ctc aac cgc ttc ctg gag gct Trp Ile Pro Lys Val Trp His His Leu Asn Arg Phe Leu Glu Ala 2210 2215 2220	6670
cac agt tcc tcg gac gtc acc atc ggc ccc cgg ctc ttc ctg tca His Ser Ser Ser Asp Val Thr Ile Gly Pro Arg Leu Phe Leu Ser 2225 2230 2235	6715
tgc ccc atc gat gtg gac ggc tcg aga gtg tgg ttc acc gac ttg Cys Pro Ile Asp Val Asp Gly Ser Arg Val Trp Phe Thr Asp Leu 2240 2245 2250	6760
tgg aac tat tcc att atc ccc tat ctc ctg gaa gcc gtc aga gaa Trp Asn Tyr Ser Ile Ile Pro Tyr Leu Leu Glu Ala Val Arg Glu 2255 2260 2265	6805
gga ctc cag ctc tat gga agg cgc gcc ccc tgg gag gat cct gcc Gly Leu Gln Leu Tyr Gly Arg Arg Ala Pro Trp Glu Asp Pro Ala 2270 2275 2280	6850
aag tgg gtg atg gac aca tat cca tgg gca gcc agc cca caa cag Lys Trp Val Met Asp Thr Tyr Pro Trp Ala Ala Ser Pro Gln Gln 2285 2290 2295	6895
cac gag tgg cct ccc ctg ctg cag tta cgg cct gag gat gtc ggc His Glu Trp Pro Pro Leu Leu Gln Leu Arg Pro Glu Asp Val Gly 2300 2305 2310	6940
ttc gac ggc tac tcc atg cct cgg gag gga tcg aca agc aag cag Phe Asp Gly Tyr Ser Met Pro Arg Glu Gly Ser Thr Ser Lys Gln 2315 2320 2325	6985
atg ccc ccc agt gat gct gaa ggt gac ccg ctg atg aac atg ctg Met Pro Pro Ser Asp Ala Glu Gly Asp Pro Leu Met Asn Met Leu 2330 2335 2340	7030
atg agg ctg cag gag gca gcc aac tac tcc agc ccc cag agc tat Met Arg Leu Gln Glu Ala Ala Asn Tyr Ser Ser Pro Gln Ser Tyr 2345 2350 2355	7075
gac agc gac tcc aac agc aac agc cat cac gat gac atc ttg gac Asp Ser Asp Ser Asn Ser His His Asp Asp Ile Leu Asp 2360 2365 2370	7120
tcc tct ttg gag tcc act ctg tgacaggggc ccggagccca gcgccctcct Ser Ser Leu Glu Ser Thr Leu 2375 2380	7171
cttctcctca ccgcattcca cctgcatccc ccacatcacc ctgaagatga cttcctgagc	7231
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tcagcacaga ccctccagac tgggtctcag agccgtgcca cccaccctcc cacacagccg Page 79	7651

gccacaggga	gaactggtgc	taaccagggt	gcttgctttg	gtcacgttca	acgcactaca	7711
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aaaaaaaaa	aa					7783

27 2380 <210> <211> PRT Homo sapiens <400> 27 Asn Gln Pro Glu Arg Leu Asn Ser Gln Val Leu Gln Gly Leu Gln Glu $1 ext{ } 10 ext{ } 15$ Pro Ala Gly Glu Gly Leu Pro Leu Arg Lys Ser Gly Ser Val Glu Asn 20 25 30 Gly Phe Asp Thr Gln Ile Tyr Thr Asp Trp Ala Asn His Tyr Leu Ala 35 40 45 Lys Ser Gly His Lys Arg Leu Ile Arg Asp Leu Gln Gln Asp Val Thr 50 55 Asp Gly Val Leu Leu Ala Gln Ile Ile Gln Val Val Ala Asn Glu Lys 70 75 80 Ile Glu Asp Ile Asn Gly Cys Pro Lys Asn Arg Ser Gln Met Ile Glu 85 90 95 Asn Ile Asp Ala Cys Leu Asn Phe Leu Ala Ala Lys Gly Ile Asn Ile Gln Gly Leu Ser Ala Glu Glu Ile Arg Asn Gly Asn Leu Lys Ala Ile 115 120 125 Leu Gly Leu Phe Phe Ser Leu Ser Arg Tyr Lys Gln Gln Gln Gln Gln 130 140 Pro Gln Lys Gln His Leu Ser Ser Pro Leu Pro Pro Ala Val Ser Gln 145 150 155 160 Val Ala Gly Ala Pro Ser Gln Cys Gln Ala Gly Thr Pro Gln Gln Gln 175 Val Pro Val Thr Pro Gln Ala Pro Cys Gln Pro His Gln Pro Ala Pro 180 185 190

Corrected Sequence Listing2.ST25
His Gln Gln Ser Lys Ala Gln Ala Glu Met Gln Ser Arg Leu Pro Gly
195 200 205 Pro Thr Ala Arg Val Ser Ala Ala Gly Ser Glu Ala Lys Thr Arg Gly 210 215 220 Gly Ser Thr Thr Ala Asn Asn Arg Arg Ser Gln Ser Phe Asn Asn Tyr 225 230 235 240 Asp Lys Ser Lys Pro Val Thr Ser Pro Pro Pro Pro Pro Ser Ser His 245 250 255 Glu Lys Glu Pro Leu Ala Ser Ser Ala Ser Ser His Pro Gly Met Ser 265 270 Asp Asn Ala Pro Ala Ser Leu Glu Ser Gly Ser Ser Ser Thr Pro Thr 275 280 285 Asn Cys Ser Thr Ser Ser Ala Ile Pro Gln Pro Gly Ala Ala Thr Lys 290 295 300 Pro Trp Arg Ser Lys Ser Leu Ser Val Lys His Ser Ala Thr Val Ser 305 310 315 320 Met Leu Ser Val Lys Pro Pro Gly Pro Glu Ala Pro Arg Pro Thr Pro 325 330 335 Glu Ala Met Lys Pro Ala Pro Asn Asn Gln Lys Ser Met Leu Glu Lys 340 345 350 Leu Lys Leu Phe Asn Ser Lys Gly Gly Ser Lys Ala Gly Glu Gly Pro 355 360 365 Gly Ser Arg Asp Thr Ser Cys Glu Arg Leu Glu Thr Leu Pro Ser Phe 370 375 380Glu Glu Ser Glu Glu Leu Glu Ala Ala Ser Arg Met Leu Thr Thr Val 385 390 395 400 Gly Pro Ala Ser Ser Ser Pro Lys Ile Ala Leu Lys Gly Ile Ala Gln 405 410 415 Arg Thr Phe Ser Arg Ala Leu Thr Asn Lys Lys Ser Ser Leu Lys Gly 420 425 430 Asn Glu Lys Glu Lys Gln Gln Arg Glu Lys Asp Lys Glu Lys 435 440 445

Ser Lys Asp Leu Ala Lys Arg Ala Ser Val Thr Glu Arg Leu Asp Leu 450 460 Lys Glu Glu Pro Lys Glu Asp Pro Ser Gly Ala Ala Val Pro Glu Met 465 470 475 480 Pro Lys Lys Ser Ser Lys Ile Ala Ser Phe Ile Pro Lys Gly Gly Lys 485 490 495 Leu Asn Ser Ala Lys Lys Glu Pro Met Ala Pro Ser His Ser Gly Ile 500 505 510 Pro Lys Pro Gly Met Lys Ser Met Pro Gly Lys Ser Pro Ser Ala Pro 515 520 525 Ala Pro Ser Lys Glu Gly Glu Arg Ser Arg Ser Gly Lys Leu Ser Ser 530 540 Gly Leu Pro Gln Gln Lys Pro Gln Leu Asp Gly Arg His Ser Ser Ser 545 550 555 560 Ser Ser Ser Leu Ala Ser Ser Glu Gly Lys Gly Pro Gly Gly Thr Thr 565 570 575 Leu Asn His Ser Ile Ser Ser Gln Thr Val Ser Gly Ser Val Gly Thr 580 590 Thr Gln Thr Thr Gly Ser Asn Thr Val Ser Val Gln Leu Pro Gln Pro Gln Gln Gln Tyr Asn His Pro Asn Thr Ala Thr Val Ala Pro Phe Leu 610 620 Tyr Arg Ser Gln Thr Asp Thr Glu Gly Asn Val Thr Ala Glu Ser Ser 625 630 635 640 Ser Thr Gly Val Ser Val Glu Pro Ser His Phe Thr Lys Thr Gly Gln 645 650 655 Pro Ala Leu Glu Glu Leu Thr Gly Glu Asp Pro Glu Ala Arg Arg Leu 660 665 670 Arg Thr Val Lys Asn Ile Ala Asp Leu Arg Gln Asn Leu Glu Glu Thr 675 680 685 Met Ser Ser Leu Arg Gly Thr Gln Val Thr His Ser Thr Leu Glu Thr 695 690

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Thr Phe Asp Thr Asn Val Thr Thr Glu Met Ser Gly Arg Ser Ile Leu 705 710 715 720 Ser Leu Thr Gly Arg Pro Thr Pro Leu Ser Trp Arg Leu Gly Gln Ser 735 Ser Pro Arg Leu Gln Ala Gly Asp Ala Pro Ser Met Gly Asn Gly Tyr 740 745 750 Pro Pro Arg Ala Asn Ala Ser Arg Phe Ile Asn Thr Glu Ser Gly Arg 755 760 765 Tyr Val Tyr Ser Ala Pro Leu Arg Arg Gln Leu Ala Ser Arg Gly Ser 770 775 780 Ser Val Cys His Val Asp Val Ser Asp Lys Ala Gly Asp Glu Met Asp 785 790 795 800 Leu Glu Gly Ile Ser Met Asp Ala Pro Gly Tyr Met Ser Asp Gly Asp 805 810 815 Val Leu Ser Lys Asn Ile Arg Thr Asp Asp Ile Thr Ser Gly Tyr Met 820 825 830 Thr Asp Gly Gly Leu Gly Leu Tyr Thr Arg Arg Leu Asn Arg Leu Pro 835 840 845 Asp Gly Met Ala Val Val Arg Glu Thr Leu Gln Arg Asn Thr Ser Leu 850 860 Gly Leu Gly Asp Ala Asp Ser Trp Asp Asp Ser Ser Ser Val Ser Ser 865 870 880 Gly Ile Ser Asp Thr Ile Asp Asn Leu Ser Thr Asp Asp Ile Asn Thr 885 890 895 Ser Ser Ser Ile Ser Ser Tyr Ala Asn Thr Pro Ala Ser Ser Arg Lys 900 905 910 Asn Leu Asp Val Gln Thr Asp Ala Glu Lys His Ser Gln Val Glu Arg 915 920 925 Asn Ser Leu Trp Ser Gly Asp Asp Val Lys Lys Ser Asp Gly Gly Ser 930 940 Asp Ser Gly Ile Lys Met Glu Pro Gly Ser Lys Trp Arg Arg Asn Pro Page 83

Ser Asp Val Ser Asp Glu Ser Asp Lys Ser Thr Ser Gly Lys Lys Asn 965 970 975

Pro Val Ile Ser Gln Thr Gly Ser Trp Arg Arg Gly Met Thr Ala Gln 980 985 990

Val Gly Ile Thr Met Pro Arg Thr Lys Ala Ser Ala Pro Ala Gly Ala 995 1000 1005

Leu Lys Thr Pro Gly Thr Gly Lys Thr Asp Asp Ala Lys Val Ser 1010 1015 1020

Glu Lys Gly Arg Leu Ser Pro Lys Ala Ser Gln Val Lys Arg Ser 1025 1030 1035

Pro Ser Asp Ala Gly Arg Ser Ser Gly Asp Glu Ser Lys Lys Pro 1040 1045 1050

Leu Pro Ser Ser Ser Arg Thr Pro Thr Ala Asn Ala Asn Ser Phe 1055 1060 1065

Gly Phe Lys Lys Gln Ser Gly Ser Ala Thr Gly Leu Ala Met Ile 1070 1080

Thr Ala Ser Gly Val Thr Val Thr Ser Arg Ser Ala Thr Leu Gly 1085 1090

Lys Ile Pro Lys Ser Ser Ala Leu Val Ser Arg Ser Ala Gly Arg 1100 1105 1110

Lys Ser Ser Met Asp Gly Ala Gln Asp Gln Asp Gly Tyr Leu 1115 1120 1125

Ala Leu Ser Ser Arg Thr Asn Leu Gln Tyr Arg Ser Leu Pro Arg 1130 1135 1140

Pro Ser Lys Ser Asn Ser Arg Asn Gly Ala Gly Asn Arg Ser Ser 1145 1150 1155

Thr Ser Ser Ile Asp Ser Asn Ile Ser Ser Lys Ser Ala Gly Leu 1160 1165 1170

Pro Val Pro Lys Leu Arg Glu Pro Ser Lys Thr Ala Leu Gly Ser 1175 1180 1185

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Corrected Sequence Listing2.ST25
Ser Leu Pro Gly Leu Val Asn Gln Thr Asp Lys Glu Lys Gly Ile
Ser Ser Asp Asn Glu Ser Val Ala Ser Cys Asn Ser Val Lys Val
Asn Pro Ala Ala Gln Pro Val Ser Ser Pro Ala Gln Thr Ser Leu
Gln Pro Gly Ala Lys Tyr Pro Asp Val Ala Ser Pro Thr Leu Arg
1235 1240 1245
Arg Leu Phe Gly Gly Lys Pro Thr Lys Gln Val Pro Ile Ala Thr
    1250
Ala Glu Asn Met Lys Asn Ser Val Val Ile Ser Asn Pro His Ala
Thr Met Thr Gln Gln Gly Asn Leu Asp Ser Pro Ser Gly Ser Gly 1280 1290
    1280
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Asp Leu Asn Gln Ser Pro Leu Ala Ser Ser Pro Ser Ser Ala His
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Corrected Sequence Listing2.ST25 1895 1900 1905 Val Lys Ile Val Val Ser Phe Gln Glu Glu Met Lys Trp Lys Glu 1910 1915 1920 Asp Ser Arg Pro His Leu Phe Leu Ile Gly Cys Ile Gly Val Ser 1930 Gly Lys Thr Lys Trp Asp Val Leu Asp Gly Val Val Arg Arg Leu 1940 1945 1950 Phe Lys Glu Tyr Ile Ile His Val Asp Pro Val Ser Gln Leu Gly Leu Asn Ser Asp Ser Val Leu Gly Tyr Ser Ile Gly Glu Ile Lys 1970 1975 1980 Arg Ser Asn Thr Ser Glu Thr Pro Glu Leu Leu Pro Cys Gly Tyr 1985 1990 1995 Leu Val Gly Glu Asn Thr Thr Ile Ser Val Thr Val Lys Gly Leu 2005 2000 2010 Ala Glu Asn Ser Leu Asp Ser Leu Val Phe Glu Ser Leu Ile Pro 2015 Lys Pro Ile Leu Gln Arg Tyr Val Ser Leu Leu Ile Glu His Arg 2030 2035 2040 Arg Ile Ile Leu Ser Gly Pro Ser Gly Thr Gly Lys Thr Tyr Leu 2045 2055 Ala Asn Arg Leu Ser Glu Tyr Ile Val Leu Arg Glu Gly Arg Glu Leu Thr Asp Gly Val Ile Ala Thr Phe Asn Val Asp His Lys Ser 2075 2080 Ser Lys Glu Leu Arg Gln Tyr Leu Ser Asn Leu Ala Asp Gln Cys 2090 2095 2100 Asn Ser Glu Asn Asn Ala Val Asp Met Pro Leu Val Ile Ile Leu 2105 2110 2115 Asp Asn Leu His His Val Ser Ser Leu Gly Glu Ile Phe Asn Gly

2125

2120

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Ser Gln Met Ile Glu Asn Ile Asp Ala Cys Leu Asn Phe Leu Ala Ala 65 70 75 80

Lys Gly Ile Asn Ile Gln Gly Leu Ser Ala Glu Glu Ile Arg Asn Gly 85 90 95

Asn Leu Lys Ala Ile Leu Gly Leu Phe Phe Ser Leu Ser Arg Tyr Lys $100 \hspace{1cm} 105 \hspace{1cm} 110$

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39960

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Page 118

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Corrected Sequence Listing2.ST25 atgatctttt taaaatatat attctgggag acattgagta aagagaaatt atttaccaga 72180 72240 gaatgaagaa ccgaggcccg attctttggc tttctgccaa agatgctgaa ggcagtgatg 72300 aatgacaaat acattaccaa ggaattctcc ctctaagagg ctgacaaaga tctgatttt 72360 aggattatat taccaccaag aagatacccc ttgtcactga gcttctaatg gaaatatggt 72420 ctatactgaa acaattctca gttctttttc tttctatctt tttttgagtt attttatctt 72480 ccaaaaatga gttatttctg ataaaataat tcacttaaat aattatgaaa gttcaaattt 72540 gtgcaaatat ttttattggg acatcttaaa attactctaa attcaaaaag aaaatatatg 72600 ctttattaaa atttgatctg taagctgctt tgtttgtaat ttaactatta tataaaaatt 72660 gtataataca tatattttat ttactttatt cctgtgttgc tttggcttgg tgagactagg tctccacatt aggagtttta ctgaatgaaa aagtatcaga atgtaacatg actttgatat 72720 72780 ggcatcagaa tttaataaga tgacatttaa taggaattag gggtaagttc Caggttttac 72840 acttaaatac aaataatcaa ttttgcaggc acaaaatact tcaaacaaaa tctgaaatca 72900 72960 aatagtgata tctaaatatc taatgtaatc ataggtaata ttagtaagtg tgttatctga 73020 aatgagtggt gtgatatcct gctttacttt gtactggtga gttctgggtg ccacctttga 73080 aaggaataaa gactattcat atctctttta taagacaata agaaaaacaa acaaacaaac 73140 aaacaaaaaa ccacctcctt tactttagct gagaaagaag ttattaggta cagcttgaca 73200 agttcagcta agcatccaaa tcttccagga ggttgttact acataaaatc aaaccttttt 73260 aattcaacta tgagcaggga gattttattt ttctttcggg tactaaagct tccaaactct gtttattcca caggaatctg aacttataga actaagagaa accattgaaa tgctgaaggc 73320 tcagaattct gctgcccagg cggctattca gggagcactg aatggtccag accatcctcc 73380 73440 73500 attaattaca gtagaactgc atttactcag tgtcactgtg cattattaat acatactagt 73560 tgtattaata gttgtattaa tacatactag tagtattaat acatactacg ttggtattaa tgtgatcaga atcctagaat tttagaacag tgacttccat tatcagataa tttttaaact 73620 73680 gatcttaaga aatttggttc tatagttgta tacacatctc tctacttgat tcagtggaga 73740 tggagatgga gtggttggtt aatacatgca tatctgactt caggcaaaac aaacccatta atgagtatga taatctagat ctgtatttaa aaatgaaata gtcaatatga tgatatagta 73800 73860 agcagtgggc attgggaaca acttttcctg gatggaggct ataaaaaggt acatttcctg 73920 tagataattt tgaaacaata aaaacaacgg gtgaaaggta gctctgtttt aaattattcc 73980 tatgcttaag caattctaaa caatgaaagg ggtatttctg ccactgcccc tacccctggg

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74040

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Corrected Sequence Listing2.ST25 ggcaacaggt agctgaatat atctacagaa attgaaaaat tggaattčtt ttgctcagaa 75960 76020 atgtgggagg ggtggagctt aaggtaaaaa ataacagtta atatctaaat tgatcaagaa atatgaaaaa ataatttgct aggttttaaa actaacaaaa accatggtta taaaggtttg 76080 76140 aatatatata ggatagttag attgtatttc tgtaatatta aaactcagca ttaaatttaa 76200 tgaacacaaa gtgattctta tcacattgac cattgacatt acatggaaaa aatagtcagt 76260 tggactaatt atgtgtcttt ccatgggtta ttaaggtaat tgtatggcat ataaatttat 76320 actggaaatc acattgaaat tcacttttag aggcccttaa aatatttctg taatatatat 76380 ttttaacata tgatcttaaa agatatattt ggaatgacac aacagtttta tagacaggcc 76440 tgactatcac acaaccacac accaatttgt gaatgtgttt ctatttcctc taaattaatg catcacattc attaacaaag tttgataaat gactatagtc tataataaaa tatttttgtt 76500 76560 tacaaacata tttaaacacc tgctattaag tataggcatt atcagatctt aaaatacaaa 76620 gatttaaaaa attaccctgt ggtcatggag ctcacaatcc actgcaaaaa taatgtttgt gataagaaat ttgaaagttg aaggtaatag aaaattttac ctttattttt caaaatgtac 76680 cattgctttc taagtcacta cttctgtgta aatatggaat tgtttttcct taagatatac 76740 76800 caaatatagt tggataacgc atgtattaaa attctgtcag cactaagttg ttttttagac atagtgatag gcaaacatag ttatattgaa tgaaaaatta gaatcaaatt tattaaacac 76860 76920 tgtgtactga ttgataccac atgccatatg cttgtatagc aatacaaggt ttggaattta 76980 taatggtaaa caaaatagat acggtctttg tctccataga acttttagtc tagtgggaga 77040 gcagaaggta aaggaatgta tgtgatcatt ggtgaagctg aacatgtata cccaaacagt tataagttcc aagatggaca ataatgggtg ccatagggaa ggagggtacc aaggaaccta 77100 77160 ctggaggtta catagggaag attattccaa ggtagtaata tttaagtgaa tatccaagga 77220 ataattgtca atcactttat aagtactgag ggaggagtat ttcaaaagag ctttgaggcg gaaaataaat tagttccttt atggaactaa tgtaaggaaa atactaagca aacatgtaat 77280 77340 aagaagaaca cggttgatga gttaagaact gacaagatta ctgaaggatt gtaggccata 77400 tttagaagtt ggatttttta tctattctta ttaaagtgag aagttattga aaggtcttaa 77460 gtgggggagt gatgatgaag tttgcctttt aaaaaagatt tttctagcta ttgtttatag 77520 aatggtttga agatgaataa gtccaatagc tatacttgct gtaaaggtta tgttggtagc 77580 ttgaactggg gcagtggtga cacagaggat gggagatgga aaatgacgag tgaacaaaca 77640 catacctgaa aatttaagtt taaaaataga cctctccatt aattcagatt gctgatattc attcggttag ccattcttta ctgaacttta tgatgcccca tatactgaat taaatactta 77700 77760 caagcactaa aaaagaaatt gttagggaac agtaaaatgc atttccttca tttcacaata 77820 ttattaatat tatggctttg ctaatcttta ttggtgaatg cagtcataat tgaaggtaac

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Corrected Sequence Listing2.ST25 ctaaagtcaa aactgcattg aaattatctg tacaaagcct tgttgacctt tattagagaa 79740 79800 ctgcctctca aaagacctaa aagacttatt tgttcagatc gagactcttc atgagccaat 79860 gtgatactct ccctctattg ctagatcttc gcatcagaag acagcattcc tctgaaagtg 79920 tttctagtat caacagtgcc acaagccatt ccagtattgg cagtggtaat gatgccgact ccaagaagaa gaaaaagaaa aactgggtaa gttaccatcc ttcatctaat tcagaagctt 79980 80040 attaatgcat aatgtgttag gcctttttct ttgggggcttt agtgatctgc agtagtttac 80100 aaagggtccc attcaagcta ctgagacctc aaatgctgca ctcatcacca aaattggagt ggcatgtact gaaaagcata cattttaatg ttgggactaa acttgggttt gaatcaccac 80160 80220 tatatctaga ccttttgagg ggcctgaatt ttctaaccaa taaaaagaca gttaatagca 80280 actatattta tttgtgaata tcatttattc aCagatgtta tctaattttt ctatagtata 80340 actatacaaa ctatgtagta taactataga gttatactaa agaaaaataa gataacatct 80400 gtgaataaat ggcttaaaat aggggtttat tgtgggcata gagatgaagg aaaagtgaaa 80460 aaatgatgat gatggtgatg atgatggtga tagtggtctt ggaggaaaag gagaatggga 80520 gttaataaag ggaaagaata aacaatgaaa ctctcattcc acctttggaa tcgacagggc 80580 ttaccgtgtg aatagtttca ccctaaaaga aatcaaccac attagtgtct gcttgatgtt tttaaccaag agaatatagc agaaatatag aaatgcactt taacagaact gtaccttaag 80640 80700 tttgctagtg atataattta tgatattgat caatagctaa atagcccagg ggaagatact 80760 gttactgcga aaaatttaaa aacaatggag tcaatgattt cttttaatac caaaaaaaaa 80820 atgtagattt tgagtaaata caactcttga tgaaatccag acataattat cagaggattt tactggagtg ctttctacaa ataatgaaag aaatatcttt ttatcttaaa aaatgtttat 80880 80940 acaggtaata ttttaaaata ctgatcagcc ttcattccct tgatttgtaa ttccacactc 81000 tttcatgttt ctgcaaggtg aactctagag gaagtgaggt gaanataaac cgtggacaat 81060 ttggcatgga tntataaaaa aaccctacct tggcatgaat gctatccatt ttggcagtag 81120 gcttttatac cttttaaaac agattacctt gtatgtcttt tctttgtgtc ttttcatttt 81180 aatctcaaat tttaaagaga tgtaaaacca ctttctgaat agagctgtag gggataccaa 81240 ttctggtttt gagtagtctg gggttggaaa atttgaatag aaaaatcaca attaatgaag 81300 tgttaggtga atttgatttc attttgcttt ttaagtttgt actgtcagca ggacatgact tgattgtagc gctaaagtgg ccatttaaaa caaattgcct tgaagagaga agcattggga 81360 81369 atggagatc